Amendments to the Claims:

1. (Previously presented) A method comprising:

sending a request to transmit with attached N_T and N_R training symbols, where N_T is the number of antennas or communication chains for transmission and N_R is the number of antennas or communication chains for reception; and

receiving training symbols attached to a clear to transmit response.

Claims 2 and 3 (Canceled).

4. (Previously presented) A method according to claim 1, including sequentially transmitting packets from a first and then a second antenna.

5. (Previously presented) A method according to claim 4, wherein a transmit antenna is selected as the one providing a best performance metric at a receiver when compared against other transmit antenna options.

6. (Original) A method according to claim 5, wherein the performance metric is a signal to noise ratio (SNR).

7. (Previously presented) A method according to claim 5, wherein the included one or more training symbols are transmitted via a select subset of a plurality of transmit antenna(e).

8. (Previously presented) A method according to claim 7, wherein the select subset of transmit antenna include at least a subset of remaining antenna(e) that were not used for transmission of a handshaking packet.

Claims 9 and 10 (Canceled).

11. (Previously presented) A method according to claim 1, further comprising:

transmitting the packet to a remote device as a training symbol via a select first of a plurality of antenna(e); and

transmitting the included training symbols to the remote device via a select second or more of the plurality of antenna(e) to enable the remote device to perform training.

12. (Original) A method according to claim 11, further comprising:

receiving at least a packet from the remote device, wherein the packet is used as a training symbol; and

performing calibration of one or more transmit chains based, at least in part, on channel performance information associated with the received training symbol(s).

13. (Previously presented) A storage medium comprising content which, when executed, causes an accessing communication device to implement a method including:

sending a request to transmit with attached N_T and N_R training symbols, where N_T is the number of antennas or communication chains for transmission and N_R is the number of antennas or communication chains for reception; and

receiving training symbols attached to a clear to transmit response.

Claims 14 and 15 (Canceled).

16. (Previously presented) A storage medium according to claim 13, including sequentially transmitting packets from a first and then a second antenna.

17. (Previously presented) A storage medium according to claim 16, wherein a transmit antenna is selected as the one providing a best performance metric at a receiver when compared against other antenna options.

18. (Previously presented) A storage medium according to claim 17, wherein the included one or more training symbols are transmitted via a select subset of a plurality of transmit antenna(e).

19. (Previously presented) A storage medium according to claim 18, wherein the select subset of transmit antenna include at least a subset of remaining antenna(e) that were not used for transmission of a handshaking packet.

20. (Previously presented) A storage medium according to claim 19, wherein the included one or more training symbol(s) are transmit via a select subset of a plurality of transmit antenna(e).

Claims 21 - 36 (Canceled).

37. (Previously presented) An apparatus comprising:

a storage medium in which to store at least executable content; and

control logic, coupled to the storage medium, to send a request to transmit with attached N_T and N_R training symbols, where N_T is the number of antennas or communication chains for transmission and N_R is the number of antennas or communication chains for reception, and receive training symbols attached to a clear to transmit response.

Claims 38 and 39 (Canceled).

40. (Previously presented) An apparatus according to claim 37, wherein the control logic selectively executes content to select the first antenna from the plurality of antenna(e) based, at least in part, on a received or perceived indication of channel performance at a remote device.

41. (Previously presented) An apparatus according to claim 37, further comprising:

a receiver, coupled with the control logic, to receive at least a packet from a remote device, wherein the packet is used as a training symbol, and to enable the control logic to perform calibration of one or more transmit chains based, at least in part, on channel performance information associated with the received training symbol(s).

42. (Withdrawn) A method for high throughput (HT) wireless communication over a channel using a plurality of antennas of a multiple-input-multiple-output (MIMO) communications system, comprising:

receiving a request to send acknowledgement packets (ACK) to a station to estimate channel state information of the channel between the communications system and the station (STA); and

sending the acknowledgement packets, wherein each acknowledgement packet comprises at least one training symbol combined with data, the at least one training symbol provided for the calculation of calibration parameters, wherein:

the at least one training symbol is sent over each antenna of at least a subset of the plurality of antennas of the communications system;

the training symbols are sent consecutively over the at least a subset of the plurality of antennas of the communications system;

the communications system is configured to transmit the acknowledgement packets at one of a plurality of transmit power levels;

the data is modulated; and

the acknowledgement packets are used to adjust a gain of the station.

43. (Withdrawn) The method of claim 42, wherein the communications system estimates channel state information for the channel and computes a steering matrix from the channel state information.

44. (Withdrawn) The method of claim 42, further including sending a number of transmit chains from the communications system, wherein the number of training symbols sent is greater than the number of transmit chains.

45. (Withdrawn) A method for high throughput wireless communication over a channel using a plurality of antennas of a multiple-input-multiple-output (MIMO) communications system, comprising:

sending a request to receive acknowledgement (ACK) packets from a station to estimate channel state information of the channel between the communications system and the station; and

receiving the acknowledgement packets, wherein each acknowledgement packet comprises at least one training symbol combined with data, the at least one training symbol provided for the calculation of calibration parameters, wherein:

at least one training symbol is received over each antenna of at least a subset of the plurality of antennas of the communications system;

the training symbols are received consecutively over the at least a subset of the plurality of antennas of the communications system;

the communications system is configured to receive the one or more acknowledgement packets at one of a plurality of receive gain levels; and

the data is modulated.

46. (Withdrawn) The method of claim 45, wherein the communications system estimates channel state information for the channel and computes a steering matrix from the channel state information.

47. (Withdrawn) The method of claim 45, further including receiving a number of receive chains from the station, wherein the number of training symbols received is greater than the number of receive chains.